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Comparative Advantage and Opportunity Cost

→ Comparative Adv. and Labor Theory of Value

- Labor is the only factor of production
- Same fixed proportion
- Homogenous. (same type of labor)

→ Haberler Theory, Opportunity Cost Theory - 1936

- In this form, law of comparative advantage is referred to as law of comparative cost
- Labor is not the only factor.
- Labor is not homogenous, but heterogenous because of certain factors such as training, wages, and productivity.
- "According to the Opportunity Cost Theory, the cost of the commodity is the amount of a second commodity that must be given to release just enough resources to produce one additional unit of the first commodity"

US

Wheat	Cloth
180	0
	} 30
150	20
	} 30
120	40
	} 20
90	60
	} 20
60	80
	} 30
30	100
	} 30
0	120

So US makes 20 units of cloth by giving up 30 units of wheat.

$30W = 20C$

$\Rightarrow 1W = \frac{2}{3}C$

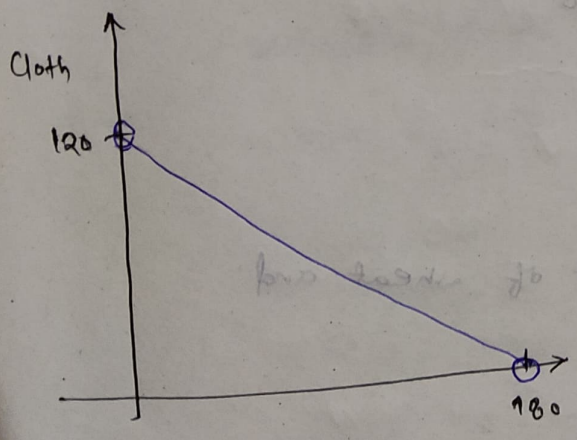
UK

Wheat	Cloth
60	0
	} 20
10 {	20
50	
	} 20
10 {	40
40	
	} 20
30	60
	} 20
20	80
	} 20
10	100
	} 20
0	120

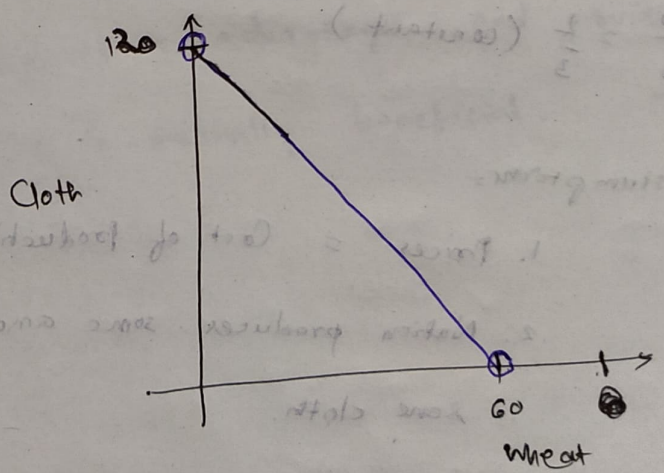
So UK makes 20 units of cloth by giving up 10 units of wheat.

$10W = 20C$

$\Rightarrow 1W = 2C$



USA



UK

Reasons for Constant Cost

1. Resources or factors of production are either perfect substitutes for each other or used in fixed proportion. in production of both the commodities.

2. All units of the same factor are homogenous or of exactly the same quality.

Opportunity Cost and Relative Commodity Price

The opportunity cost of wheat is equal to the amount of cloth that the nation must give up to release enough resources to produce one additional unit of wheat.

This is given by the slope of the Prod^{n} Possibility Curve / Transformation Curve / Marginal Rate of Technical Substitution.

US	UK
$\frac{120}{180} = \frac{2}{3}$ (constant)	$\frac{120}{60} = 2$ (constant)

Assumptions:

1. Prices = Cost of production
2. Nation produces some amount of wheat and some cloth.

The Opportunity Cost of Wheat = The Opportunity Cost of Cloth.

P_w / P_c

US

$P_w / P_c = 0.66$ lower

$P_c / P_w = 1.5$

UK

$P_w / P_c = 2$

$P_c / P_w = 0.5$ lower

- US has a comparative advantage in wheat due to lower opportunity cost.
- UK has a comparative advantage in cloth due to lower opportunity cost.

P_w / P_c ⇒ determined by production & supply consideration in each nation.

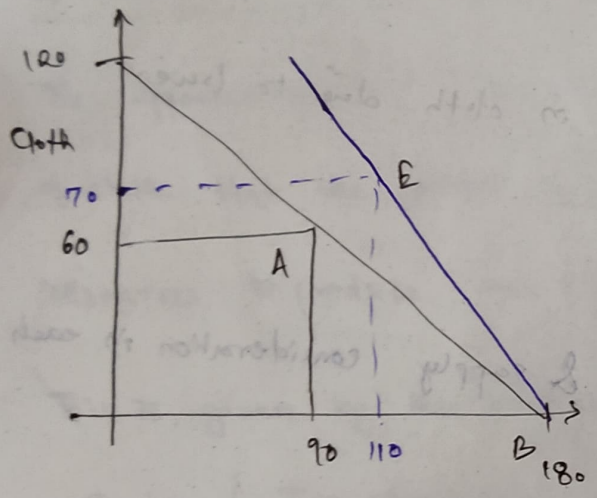
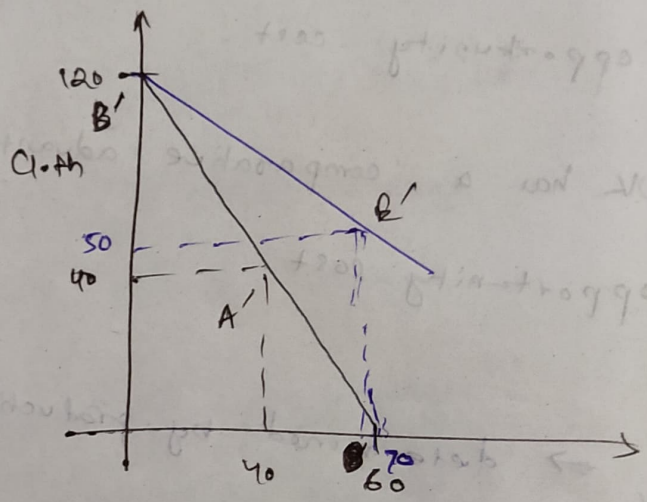
⇒ Demand consideration do not enter at all in the determination of relative commodity prices.

Conclusion: Difference in relative commodity prices between countries is a reflection of the comparative advantage and provides a basis of trade, which is mutually beneficial.

Basis for Trade and Gain from Trade

With the absence of trade he chooses that commodities that it produces.

As a result, the nation's prodⁿ possibility frontier represents the consumption function.

	US	UK
		
	Wheat	Wheat
Before Trade	90 W = 60 C	40 W = 40 C
With Trade	Specialised in wheat at B = 180.	Specialised in cloth at B' = 120
Exchange Rate	90 W ✓ 60 C	✓ 40 W 40 C
	US will go to trade if it gets more than 60 C	UK will trade if it gets more than 40 W

Let rate be 70W = 70C

~~After Trade~~

US

Before Trade: 90W, 60C

+20W

+10C

After Trade: 110W ← (180W − 70W), 70C

UK

40W

40C

+30W

+10C

70W

50C (120C − 70C)

Total ~~output~~ Gain: 50W and 20C

(+30 +20) (+10 +10)